

REMARKS

Claims 36-45 are currently pending in the application, of which claim 36 is independent. In view of the following Remarks, Applicants respectfully request reconsideration and timely withdrawal of the pending rejections for the reasons discussed below.

Interview Summary

Applicants thank the Examiner for the courtesies extended during the interview of April 19, 2005. During the interview, Applicants' representative presented that the newly introduced reference, U. S. Patent No. 5,641,974 issued to den Boer, et al. ("den Boer") does not cure the deficiency of the primary references.

Rejections Under 35 U.S.C. §103

Claims 36-45 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U. S. Patent No. 5,259,881 issued to Edwards, et al. ("Edwards") in view of den Boer and further in view of U. S. Patent No. 5,578,520 issued to Zhang, et al. ("Zhang"). Applicants respectfully traverse this rejection for at least the following reasons.

Independent claim 36 recites "the apparatus sequentially forms the gate insulating layer, the amorphous silicon layer, the doped amorphous silicon layer and the metal layer without breaking a vacuum and *without patterning the gate insulating layer, the amorphous silicon layer, the doped amorphous silicon layer and the metal layer.*"

In this regard, the Examiner asserted that den Boer discloses, in column 8, lines 33-44, forming a metal layer without previously patterning the amorphous silicon layer and the doped amorphous silicon layer. This assertion is respectfully disagreed with.

Column 8 of den Boer describes "Optionally, one of the TFT metal source/drain layers may be deposited before forming the TFT island" (lines 31-32) and "Alternatively, a first metal layer may be deposited and patterned to form drain electrode portion 29 and storage capacitor electrode 12, and a second metal layer may be deposited and patterned to form source electrode portion 31" (lines 49-53).

Although den Boer discloses forming a metal layer before forming a TFT island, den Boer does not disclose or suggest any need or desire not to pattern the gate insulating layer 21, the semiconductor layer 23 and the semiconductor contact layer 25 before forming a metal layer. Thus, den Boer is open to the possibility of etching the gate insulating layer 21, the semiconductor layer 23 and the semiconductor contact layer 25 (e.g., to form an opening exposing a gate pad) *prior to* forming the TFT island.

Of course, den Boer is open to the possibility of not etching the gate insulating layer 21, the semiconductor layer 23 and the semiconductor contact layer 25 prior to forming the TFT island. However, as well known, in order to establish a *prima facie* case of obviousness, den Boer must provide some suggestion or motivation deliberately not to etch the gate insulating layer 21, the semiconductor layer 23 and the semiconductor contact layer 25 before forming the metal layer.

Given that den Boer mainly teaches forming the TFT island *before* forming the metal layer, den Boer does not provide any suggestion or motivation deliberately not to

etch the gate insulating layer 21, the semiconductor layer 23 and the semiconductor contact layer 25 before forming the metal layer.

Since the cited references lack the motivation or suggestion not to pattern those layers prior to forming the metal layer, it is submitted that claim 36 is patentable over the cited references. Claims 37-45 are dependent from claim 36 and would be also patentable at least for the same reason.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claims 36-45.

Claims 36-45 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U. S. Patent No. 5,512,320 issued to Turner, et al. ("Turner") in view of den Boer and further in view of Zhang. Applicants respectfully traverse this rejection for at least the following reasons.

As previously mentioned, den Boer does not provide any suggestion or motivation deliberately not to etch the gate insulating layer 21, the semiconductor layer 23 and the semiconductor contact layer 25 before forming the metal layer. Thus, it is submitted that claim 36 is patentable over the cited references. Claims 37-45 are dependent from claim 36 and would be also patentable at least for the same reason.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claims 36-45.

CONCLUSION

Applicants believe that a full and complete response has been made to the pending Office Action and respectfully submit that all of the stated objections and grounds for rejection have been overcome or rendered moot. Accordingly, Applicants respectfully submit that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicants' undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

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